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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,808	01/26/2007	Olivier Guerret	FR-AM 1979 NP	3993
<div>7590 Steven D Boyd Arkema Inc 2000 Market Street 26th Floor Philadelphia, PA 19103</div>			<div>EXAMINER FERGUSON, LAWRENCE D</div>	
			<div>ART UNIT 1783</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 10/14/2011</div>	<div>DELIVERY MODE PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,808	Applicant(s) GUERRET ET AL.	
	Examiner LAWRENCE FERGUSON	Art Unit 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-16 and 23 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-16 and 23 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Request for Continued Examination

1. This action is in response to the request for continued examination filed July 15, 2011. Claim 1 was amended and claim 23 was added rendering claims 1-16 and 23 pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

New Matter - 35 U.S.C. 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1, the phrase, 'wherein said composition contains no core-shell' is not supported by the specification.

The Examiner was not able to find support for the added limitation discussed above at the cited portions of the specification.

Claim Rejections – 35 USC § 103(a)

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation).

Akio discloses a film comprising 95% by weight of at least one block copolymer, which comprises acrylic monomers along with a polyfunctional inorganic radical comprising potassium, which has a molar mass of 39.1 (abstract, paragraph 0040, claim 1). 0 to 5% by weight of at least one polymer A is interpreted as having 0% by weight of polymer A. Although Akio does not explicitly show the structure of core (I), because the reference discloses a film comprising a similar inorganic radical with molar mass of greater than 14, it would have been obvious to one of ordinary skill in the art for the core(I) to have a structure similar to the Ia or Ib, absent any evidence to the contrary. It does not appear that Akio discloses core-shell additives or copper complexes. The phrase, “thermoformed film” introduces a process limitation to the product claim. Additionally, in claim 1, the phrase, “resulting from the decomposition of the corresponding alkoxyamine” introduces a process limitation to the product claim. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a single layer film. The reference suggests such a product because Akio discloses a single sheet film.” In claim 1, the newly added phrase, “wherein polymer A and polymer block A have the same

composition” does not further limit the claim, as 0 to 5% by weight of at least one polymer A is interpreted as having 0% by weight of polymer A, as in claims 1 and 8-10.

Concerning claim 2, the instant claims only require an organic or inorganic radical with a molar mass of greater than or equal to 14, where for examination purposes the examiner has selected the inorganic radical, which renders the organic radical as not being required by instant claims 1 and 9-10.

Concerning claim 3, Akio discloses the film comprises zinc (paragraph 0073) which functions as a polyfunctional inorganic radical.

Concerning claim 4, the phrase, “obtained according to the controlled polymerization process consisting of the polymerization...and recovery of the copolymer formed” introduces a process limitation to the product claim. “For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a film structure starting from a composition having from 95-100% by weight of at least one block copolymer corresponding to the formula $(A)_m-(B)_n$. I. The reference suggests such a product because Akio discloses a film comprising 95% by weight of at least one block copolymer, which comprises acrylic monomers along with a polyfunctional inorganic radical comprising potassium, which has a molar mass of 39.1 (abstract, paragraph 0040, claim 1). 0 to 5% by weight of at least one polymer A is interpreted as having 0% by weight of polymer A.

Concerning claims 5-6, because alkoxyamine and the control agent are only required for the method of making the film, these materials are not required in the actual product of the claimed invention.

Concerning claim 7, the film comprises alkyl acrylates with an alkyl chain comprising butyl acrylate (which has at least two carbon atoms) (paragraph 0009).

Concerning claims 11-12, because the film of Akio comprises a similar material for the B block and is used in a film, it would have been obvious to one of ordinary skill in the art for the B block to exhibit a T_g of less than 0°C and to exhibit elastomeric domains, where obtaining the claimed value of a size of less than 50nm would have been obvious based on optimization through routine experimentation to function properly in the film.

Concerning claim 13, the film has a thickness of about 1-300 micrometers (paragraph 0071).

Concerning claim 14, because the film of Akio comprises similar materials with a similar purpose, it is inherent for the film to have a modulus of elasticity, a haze and an elongation at break, where obtaining the claimed values would have been based on optimization through routine experimentation to function properly in the film.

Concerning claim 15, the film additionally comprises paints and pigments such as titanium oxide (paragraph 0073).

Claim Rejections – 35 USC § 103(a)

6. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation) in view of Kim (U.S. 6,689,441).

Akio is taken as above. Akio does not disclose a multilayer composition as in amended claim 16. Kim teaches a thermoplastic film(B1) adhered to a polyvinyl chloride or polypropylene base layer (A) (column 2, lines 31-40; column 3, lines 19-26; column 4, lines 13-22 and Figure 2a). Akio and Kim are combinable because they are related to a similar technical field, which is thermoplastic articles. Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the thermoplastic film, as taught in Akio, for the thermoplastic film of Kim to achieve the predictable result of improving the strength and durability of the thermoplastic film. Additionally, Kim shows it is known in the art to have polyvinyl chloride or polypropylene films laminated to thermoplastic film layers.

Response to Arguments

7. Applicants arguments of the rejection made under 35 U.S.C. 103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation) has been considered but is unpersuasive. Applicant argues alkoxyamines are not taught or suggested by the cited art. Examiner notes instant claims 1-3 do not require alkoxyamine. Additionally, although Akio does not explicitly show the structure of core (I), because the reference

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discloses a film comprising a similar inorganic radical with molar mass of greater than 14, it would have been obvious to one of ordinary skill in the art for the core(I) to have a structure similar to the Ia or Ib, absent any evidence to the contrary. Applicant argues the film of Akio is not similar to the film of the instantly claimed invention because they are made using different processes. The patentability of a product does not depend on its method of production. In the present case, the recited steps imply a structure having a single layer film with at least one block copolymer. The reference suggests such a product because Akio discloses a single sheet film comprising 95% by weight of at least one block copolymer. Concerning claim 2, Applicant argues choosing Z as an inorganic group does not make organic core group any less organic. In claim 1, Applicant discloses Z denotes an organic or inorganic radical with a molar mass of greater than or equal to 14. Concerning claim 4, Applicant argues although product by process claims are only limited by the structure, the structure comes from the alkoxyamine.

Examiner maintains that because alkoxyamine is only required for the method of making the film, it is not required in the actual product of the claimed invention. The decomposition of alkoxyamine mainly occurs through carbon oxygen bond cleavage, and once decomposed the core structure would comprise monomers and a polyfunctional inorganic radical, such as the acrylic monomers and polyfunctional inorganic radical comprising potassium, as disclosed in Akio (abstract, paragraph 0040, claim 1).

Applicants arguments of the rejection made under 35 U.S.C. 103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation) in view of Kim (U.S.

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6,689,441) has been considered but is unpersuasive. Applicant argues Kim does not cure the defects of Akio. Because Akio has been maintained for reasons of record, Akio in view of Kim has also been maintained for reasons of record.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-

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272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample, can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lawrence Ferguson/
Patent Examiner, Art Unit 1783

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1783